

WHAT IS CLAIMED IS:

1. A process for manufacturing a lubricant composition comprising combining a superabsorbent polymer with a material for decreasing friction between moving surfaces.

2. The process of claim 1, wherein said superabsorbent polymer absorbs from about 25 to greater than 100 times its weight in water.

3. The process of claim 2, wherein said superabsorbent polymer comprises a polymer of acrylic acid, an acrylic ester, acrylonitrile or acrylamide, including co-polymers thereof or starch graft co-polymers thereof or mixtures thereof.

4. The process of claim 3, wherein said material for decreasing friction comprises a petroleum lubricant containing an additive, water containing an additive, synthetic lubricant, grease, solid lubricant or metal working lubricant, wherein said synthetic lubricant, grease, solid lubricant or metal working lubricant optionally contain an additive.

5. The process of claim 4, wherein said material for decreasing friction comprises a solid inorganic lubricant.

6. The process of claim 5, wherein said solid inorganic lubricant comprises graphite, molybdenum disulfide, cobalt chloride, antimony oxide, niobium selenide, tungsten disulfide, mica, boron nitride, silver sulfate, cadmium chloride, cadmium iodide, borax, basic white lead, lead carbonate, lead iodide, asbestos, talc, zinc oxide, carbon,

babbit, bronze, brass, aluminum, gallium, indium, thallium, thorium, copper, silver, gold, mercury, lead, tin, indium, or the Group VIII noble metals or mixtures thereof.

7. The process of claim 3, wherein said material for decreasing friction comprises a phosphate.

8. The process of claim 3, wherein said material for decreasing friction comprises zinc phosphate, iron phosphate or manganese phosphate, or mixtures thereof.

9. The process of claim 3, wherein said material for decreasing friction comprises a solid organic lubricant.

10. The process of claim 9, wherein said solid organic lubricant comprises a fluoroalkylene homopolymer or copolymer, a lower alkylene polyolefin homopolymer or copolymer, a paraffinic hydrocarbon wax, phenanthrene, copper phthalocyanine, or mixtures thereof.

11. The process of claim 3, wherein said material for decreasing friction comprises a metal working lubricant containing water.

12. The process of claim 11, wherein said metal working lubricant containing water comprises an emulsion of oil and water.

13. The process of claim 11, wherein said metal working lubricant containing water comprises a solid inorganic lubricant and water.

14. The process of claim 13, wherein said solid inorganic lubricant comprises graphite, molybdenum disulfide, cobalt chloride, antimony oxide, niobium selenide, tungsten

disulfide, mica, boron nitride, silver sulfate, cadmium chloride, cadmium iodide, borax, basic white lead, lead carbonate, lead iodide, asbestos, talc, zinc oxide, carbon, babbit, bronze, brass, aluminum, gallium, indium, thallium, thorium, copper, silver, gold, mercury, lead, tin, indium, or the Group VIII noble metals or mixtures thereof.

15. A product made by the process of claim 1.

16. A product made by the process of claim 2.

17. A product made by the process of claim 3.

18. A product made by the process of claim 4.

19. A product made by the process of claim 5.

20. A product made by the process of claim 6.

21. A product made by the process of claim 7.

22. A product made by the process of claim 8.

23. A product made by the process of claim 9.

24. A product made by the process of claim 10.

25. A product made by the process of claim 11.

26. A product made by the process of claim 12.

27. A product made by the process of claim 13.

28. A product made by the process of claim 14.

29. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying a lubricant composition comprising a superabsorbent polymer combined with a material for decreasing friction between moving surfaces, to at least one of said surfaces.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000

30. The process of claim 29, wherein said superabsorbent polymer absorbs from about 25 to greater than 100 times its weight in water.

31. The process of claim 30, wherein said superabsorbent polymer comprises a polymer of acrylic acid, an acrylic ester, acrylonitrile or acrylamide, including co-polymers thereof or starch graft co-polymers thereof or mixtures thereof.

32. The process of claim 31, wherein said material for decreasing friction comprises a petroleum lubricant, water, synthetic lubricant, grease, solid lubricant or metal working lubricant, wherein said synthetic lubricant, grease, solid lubricant or metal working lubricant optionally contain an additive.

33. The process of claim 32, wherein said material for decreasing friction comprises a solid inorganic lubricant.

34. The process of claim 33, wherein said solid inorganic lubricant comprises graphite, molybdenum disulfide, cobalt chloride, antimony oxide, niobium selenide, tungsten disulfide, mica, boron nitride, silver sulfate, cadmium chloride, cadmium iodide, borax, basic white lead, lead carbonate, lead iodide, asbestos, talc, zinc oxide, carbon, babbitt, bronze, brass, aluminum, gallium, indium, thallium, thorium, copper, silver, gold, mercury, lead, tin, indium, or the Group VIII noble metals or mixtures thereof.

35. The process of claim 31, wherein said material for decreasing friction comprises a phosphate.

36. The process of claim 31, wherein said material for decreasing friction comprises zinc phosphate, iron phosphate or manganese phosphate, or mixtures thereof.

37. The process of claim 31, wherein said material for decreasing friction comprises a solid organic lubricant.

38. The process of claim 37, wherein said solid organic lubricant comprises a fluoroalkylene homopolymer or copolymer, a lower alkylene polyolefin homopolymer or copolymer, a paraffinic hydrocarbon wax, phenanthrene, copper phthalocyanine, or mixtures thereof.

39. The process of claim 31, wherein said material for decreasing friction comprises a metal working lubricant containing water.

40. The process of claim 39, wherein said metal working lubricant containing water comprises an emulsion of oil and water.

41. The process of claim 39, wherein said metal working lubricant containing water comprises a solid inorganic lubricant and water.

42. The process of claim 41, wherein said solid inorganic lubricant comprises graphite, molybdenum disulfide, cobalt chloride, antimony oxide, niobium selenide, tungsten disulfide, mica, boron nitride, silver sulfate, cadmium chloride, cadmium iodide, borax, basic white lead, lead carbonate, lead iodide, asbestos, talc, zinc oxide, carbon, babbit, bronze, brass, aluminum, gallium, indium, thallium,

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000

thorium, copper, silver, gold, mercury, lead, tin, indium, or the Group VIII noble metals or mixtures thereof.

43. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 15 to at least one of said surfaces.

44. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 16 to at least one of said surfaces.

45. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 17 to at least one of said surfaces.

46. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 18 to at least one of said surfaces.

47. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 19 to at least one of said surfaces.

48. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 20 to at least one of said surfaces.

49. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 21 to at least one of said surfaces.

50. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 22 to at least one of said surfaces.

51. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 23 to at least one of said surfaces.

52. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 24 to at least one of said surfaces.

53. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to

decrease friction between said moving surfaces, comprising applying the product of claim 25 to at least one of said surfaces.

54. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 26 to at least one of said surfaces.

55. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 27 to at least one of said surfaces.

56. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces in order to decrease friction between said moving surfaces, comprising applying the product of claim 28 to at least one of said surfaces.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000